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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,208	04/23/2001	Christiaan Jacob Martens	NL000217	7398

7590

06/05/2002

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EXAMINER

GLASS, CHRISTOPHER W

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,208

Applicant(s)

MARTENS ET AL.

Examiner

Christopher W. Glass

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the movement detector "characterized in that the cross-section of the mirror assembly (4) varies from a smallest to a largest cross-section along its longitudinal axis" (claim 8) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Abstract

2. The abstract of the disclosure is objected to because the length is too short to adequately describe the invention. Correction is required. See MPEP § 608.01(b).

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Art Unit: 2878

4. The disclosure is objected to because of the following informalities:

The disclosure fails to provide proper section headings, as described above.

The paragraph contained in sentences 13-17 of page 1 comprises awkward grammar and language, which renders this section unclear. On line 15, a new sentence could start with "As a result, the movement detector," which would replace "...so that the movement detector." It is also unclear as to what "the unwanted person" refers to (line 16), since only a "human" is referenced in line 2; "Simply discovered by the unwanted person" could be changed to read "easily discovered, as by a burglar."

On line 3 of page 2, "assembly need amount to" could read "assembly need only amount to" and "only" (end of line) could be removed.

On line 2 of page 3, "therein" should be replaced by "wherein."

Appropriate correction is required.

Claim Objections

5. Claims 5-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the limitations of these claims will be treated to depend from claim 1.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5,7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,087,688 to Keller.

Regarding claim 1: Keller shows in Figure 3 a movement detector which is capable of detecting movement of a body in a space and includes a light-sensitive sensor 5 and optical means 2,3,11 which are capable of projecting a multiple image of the space onto the sensor 5, characterized in that the optical means 2,3,11 include a mirror assembly 2 having a kaleidoscopic effect.

Regarding claim 2: The movement detector shown in Figure 3 is characterized in that the mirror assembly 2 constitutes an elongate body whose reflecting surface 11 faces inwards. "The inner surface of the tubular-shaped housing 2 has the shape of a usual prism of random, curvilinear limited cross-section or a cross-section composed of straight lines...and the prism surface is then substantially in the form of a cylindrical surface, or there can be used a tube having a rectangular or square cross-section" (Column 3, lines 45-53).

Regarding claim 3: The optical means 2,3,11 of the movement detector of Keller comprises a "collecting lens 3 serving as a focusing optical system" (Column 3, lines 22-23).

Regarding claim 4: As shown in Figure 3, the sensor 5 is situated near a first end of the mirror assembly 2, whereas the lens 3 is situated near the second end of the mirror assembly.

Regarding claim 5: The cross-section of the mirror assembly 2 forms a rectangular polygon (see Figure 3 and Column 3, lines 46-56).

Regarding claim 7: The movement detector of Keller shows in Figure 3 the cross-section of the mirror assembly 2 as being essentially the same along the entire longitudinal axis.

Regarding claim 9: The sensor 5 includes an infrared sensor (see Column 3, lines 38-45).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller, in view of U.S. Patent No. 5,103,346 to Chang. The disclosure of Keller cites that the "foregoing cross-section (of mirror assembly 2) can (instead) be selected to be also polygonal in shape, so that a multi-sided prism is formed" and although a cross-sectional formation of essentially a triangle is not expressly disclosed, this arrangement is well known in the art (Column 3, lines 54-56). Figures 1,3 and 4 of Chang show a triangle-shaped deflector employed in a radiation sensitive detector device. The detector device is shown as comprising a sensor 5, sensor housing 66, lens 3, and detecting opening 23 disposed around the signal deflector 6. Specifically disclosed in Figure 4, the triangle-shaped mirror deflector 6, having reflective surfaces 61,62,64,65, and common edge 82, deflects incident radiation to the sensor device 5 within sensor housing 66, as to provide a 180-degree detecting range. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the cross-section of the mirror assembly 2 of the device of Keller in an essentially-triangular manner, in order to effectively deflect radiation from a wide range of incident angles to the sensor 5, as taught by Chang. It also would have been obvious to construct the mirror assembly 2 to have the cross-section vary from a smallest to a largest cross-section along the longitudinal axis, since Keller

Art Unit: 2878

teaches the possibility of several polygonal formations for this element, in order to offer this same advantage of deflecting radiation from a wide range of incident angles.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller, in view of U.S. Patent No. 5,717,203 to Yung. Keller shows in Figure 3 a movement detector having a sensor 5 and optical means 2,3,11 arranged in such a manner that they project a multiple image of the space onto the sensor 5, characterized in that the optical means 2,3,11 include a mirror assembly 2 having a kaleidoscopic effect. Keller does not expressly disclose installing the movement detector (comprising mirror assembly 2, detector 5, and optical means 3,11) in a space such that the sensor 5 is arranged above a ceiling of the space and the mirror assembly 2 extends essentially through the ceiling. However, it is well known to mount motion detectors in ceiling arrangements. Yung discloses in Figures 1,2,5, and 6 an infrared motion detector with 180-degree detecting range, comprising optical means (including focusing lens 20, housing 12, and deflector unit 30 having reflective prism surfaces 35), and an infrared sensor 40. The "housing structure 12 (is) connected to a base 14 with an articulated arm system 16 such that its orientation can be adjusted even after the base 14 is attached to a fixture such as a wall or a ceiling" (Column 2, lines 50-53). It would have been obvious, therefore, to one having ordinary skill in the art at the time the invention was made, to mount the device of Keller such that the light sensor 5 was arranged above a ceiling of a space, and such that the mirror assembly 2 extends essentially through the ceiling, in order to provide a high level of visibility for detecting movement, as of burglars, in a space.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 3,864,566 to Simpson et al discloses an optical system and detector having infrared detection capability, which shows in Figures 1 and 2 a housing 10 having a mirror assembly 22, apertures 16, and a refracting element 26 disposed around the detector 30.

U.S. Patent No. 6,031,456 to Hanyuda concerns a obstacle or movement detector 10 (see Figures 1 and 2), which comprises a base 11 "which is mounted on a ceiling," and an infrared sensor 12.

U.S. Patent No. 3,923,382 to Harding discloses in Figures 1-3 a multifaceted mirror structure 11 for an infrared radiation detector, which comprises several polygonal reflecting faces 12-30 (preferably shaped as "spherical squares, triangles, or hexagons") for deflecting, from "a number of discrete, spaced-apart fields of view," incident radiation to a detector 32 (Column 2, lines 25-26; Column 1, line 43).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher W. Glass whose telephone number is 703-305-1980. The examiner can normally be reached on 9:00am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached at 703-308-4881. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Application/Control Number: 09/840,208

Page 9

Art Unit: 2878

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May 30, 2002


STEPHANIE ALLEN
PRIMARY EXAMINER